

ART. IV.—A CONTRIBUTION TO THE STUDY OF CEREBRAL LOCALIZATION.

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WHILE physiologists, by experimentation on animals, have laid a solid foundation for the study of cerebral localization, it remains for the pathologist to rear the super-structure and thus complete the science.

This completion can only be accomplished by the accumulation of an immense number of clinico-pathological facts scientifically recorded.

With no other apology for adding to a subject seeming already trite, the following cases are adduced.

In five of these seven cases the lesion was traumatic, and negative as well as positive cases are introduced.

CASE I.—*Traumatic Capillary Cerebral Hemorrhage.**—The patient, a male aged 42, while drunk, fell backwards down stairs. The symptoms the first day were: Unconsciousness, closed eyes, photophobia, dilated pupils (left larger), downward deviation of the right eye, right facial palsy, a contraction of the muscles of the back of the neck, rotatory movements of the head, paralysis of the right upper and lower extremities, and incontinence of urine.

Respiration 34, pulse 100, temperature normal.

On the *second day* there were contracted pupils; A. M., pulse 125, temperature 39.5° C.; P. M., pulse 126, temperature 40.7° C. On the third day there was stertorous respiration, with twitching of the left side of the face.

The temperature five minutes after death was 43.25° C. Two hours later, 41.25° C., in the axilla.

The lesions were fresh adhesion between the dura and pia mater over the convexity of both occipital and the upper part of the parietal lobes, and small hemorrhages in the cortex, varying from a small pea to a large bean in size. Three were

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While in an individual case a very small and circumscribed lesion may produce a certain, clearly defined set of symptoms, identically the same set of symptoms may be produced in another case by an equally small and localized lesion situated at a point seemingly some distance removed from the first centre. For instance, the centre for the arm is considered to be on the ascending frontal convolution at about its middle, while in cases of monoplegia or monospasm of the arm, lesions are found above, below and at the middle of the ascending frontal convolution in front of it, at the bottom of the fissure of Rolando, and behind the fissure on the ascending parietal.

It would seem very easy for a small patch of grey matter, occupying at the start perhaps a similar position in all brains, in the wrinkling process the cortex undergoes in the development of the convolutions, to be found in two developed (*i. e.*, convoluted) brains at a slightly different level, at the bottom of a fissure or across a fissure on a neighboring convolution.

Another drawback, it would seem, is the common practice of recording the location of lesions on diagrams instead of on sketches of the brain itself. In this way a predominance of some lobes over others may be overlooked.

That there are centres, sensory or otherwise, in the non-excitatory districts of the brain not yet localized, the writer thinks not altogether improbable, and with Ferrier* thinks our ignorance of them is due to the fact that the symptoms escape our observation.

**Localization of Cerebral Disease*, New York, 1879, page 129.
